

## TORREYA

March, 1903

## VITAL PERSISTENCY OF AGAVE AMERICANA

BY S. B. PARISH

In the autumn of 1890 Mr. George S. Myers, of Riverside, California, planted on his grounds a young *Agave Americana*. By 1900 it had become so inconveniently large that its removal

FIG. 1. *Agave Americana*.

was desirable, and in March, its leaves having first been sawed off, it was dug up, and, by the aid of a horse, drawn aside, where it was left to become dry and be burned. The next spring it

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was still living, but the fibrous roots were dry, and were scorched off with the assistance of some rubbish. The trunk itself showed no noticeable shrinkage or desiccation.

In May, 1902, it was observed to be putting forth a flowering scape. The plant had now lain for two years on the dry ground without any radical connection with it, and, consequently, without receiving any nutriment or water. The growth of the scape was rapid, averaging in its early period six inches a day. As the trunk lay on its side the scape necessarily turned upwards at right angles, and it was maintained in an upright position by means of guy wires. Eventually it attained a height of about fifteen feet, flowered freely and produced fruit. The illustration is from a photograph taken August 15, 1902.

In November, of the same year, the energy of the plant being still unexhausted, it produced three small scapes from near the base of the crown, the largest of which was about eighteen inches high. These also flowered.

Mr. E. A. Zumbro, of the Riverside High School, informs me that, in another case, he knew of an agave which flowered after it had been dug up and had lain on hard ground "a long time."

It is frequently the custom here in California, as an agave grows large, to keep all but its uppermost leaves pruned off; and such plants flower vigorously. The nutriment which agaves store up preparatory to inflorescence is deposited mainly in the crown and in the leaf-bases, so that the removal of the leaves themselves affects the plant only to a limited degree. The drying of the sap on the cut surfaces seems to seal them up so as to prevent much evaporation.

For the greatest part, it is upon this accumulated nutriment that an agave draws for the rapid development that characterizes its reproductive period. The supplies directly contributed by the root system at this time must be comparatively insignificant. We are not surprised at seeing agaves flowering freely in the sterile and arid soil of the deserts, where, at the time, their roots can find little, if any, moisture — must, in fact, serve mainly as mere holdfasts.

It is but a step further to find a plant accomplishing its repro-

ductive function after it has been deprived of roots. Why, in the present case, it did not do this in the first year, rather than in the second, is not clear. Evidently its vigor and resources must have been greater then; for there could have been no gain, and there must have been some loss. Perhaps it was that unexplained force which sometimes causes a starved and dying plant to throw all its remaining strength into a final effort for the perpetuation of its species.

The production of secondary, and quasi-lateral, inflorescences is not uncommon in agaves, both in cultivation and when growing wild. As is well understood, they are produced by offsets, either developed or latent.

SAN BERNARDINO, CALIFORNIA,  
December 20, 1902.

## A KEY TO THE NORTH AMERICAN SPECIES OF LENTINUS—I

BY F. S. EARLE

The genus *Lentinus* was founded by Fries in 1825.\* From the first it has been an incongruous aggregate consisting of several groups of quite diverse species which agree only in a certain toughness of texture. In outlining the original generic characters, Fries says the lamellae are concrete with the pileus, while in *Agaricus* he says they are discrete. This character, however, is shared with *Panus*, which thus seems to differ only in being still firmer in texture. Many species of *Lentinus* have the lamellae more or less lacerate or dentate on the margin, but, from the first, species have been included in the genus without this character.

The genus is now usually divided into the seven following sections:

### KEY TO THE SECTIONS OF LENTINUS

- |   |                         |
|---|-------------------------|
| 1. Stipe central or excentric; pileus entire. | 2. ( <i>Mesopodes</i> ) |
| Stipe lateral or wanting; pileus dimidiate.   | PLEUROTI.               |
| Stipe wanting; pileus resupinate.             | RESUPINATI.             |

\* Syst. Orb. Veg. 77. 1825.